The Florida Senate

Interim Project Report 2004-148 *December 2003*

Committee on Home Defense, Public Security, and Ports James E. "Jim" King, Jr., President

HOSPITAL RESPONSE CAPACITY

SUMMARY

Florida has 226 hospitals with licensed "acute care" beds, twelve federal hospital facilities, and numerous other hospitals and medical facilities. Of those 219 hospitals offer emergency services and care. There are 20 designated trauma centers in the state, including 12 pediatric care trauma centers. Florida has over 50,000 licensed "acute care" hospital beds and, for the most part, Florida hospitals meet federal standards for surge capacity based on hospital provided survey information.

While the state has well-regulated hospital care available, there is a disparity of available trauma centers across the state. Of the 19 statutorily designated "trauma service areas," seven lack trauma center care. Several have more than one trauma center. North Florida, from Bay County to Hamilton County, in particular, lacks access to trauma center care within specified time parameters for optimum treatment. Emergency department care is available across this area, but no hospital within the area appears inclined to pursue a "trauma center" designation. Such a designation requires twenty-four-hour-a-day availability of specialized medical professionals. Staffing costs for these specialists have served as a disincentive for hospitals to pursue the designation. There are no off-setting incentives, or mandates, that would serve as a mechanism for changing this position at this time.

Section 395.4015, F.S., requires the Department of Health to establish "trauma regions" to cover all geographic regions of the state. To date, only four trauma regions, encompassing 15 counties, have been established. Fifty-two counties are currently not assigned to a "trauma region." There has been some discussion about adopting the Regional Domestic Security Task Force (RDSTF) regions as the state's "trauma regions" while maintaining the 19 "trauma service areas" within those regions. The trauma service areas are directly correlated with patient response times, while the regions could be standardized to conform with other response agencies and plans across the state. This concept has not been formally recommended by any organization.

A statewide strategic plan for hospital response is being developed by a working group representing several state and local agencies, hospitals, trauma and emergency medical professionals, hospital CEOs and security directors. The Florida Hospital Disaster Response Plan is scheduled for final adoption by the hospitals and the Domestic Security Oversight Board in March 2004. This plan will serve as guidance for hospitals, other first responders and law enforcement and will provide the basis for funding recommendations to increase hospital response capacity across the state.

Many issues, including interoperability of communications, coordination with local first responders, patient transport, supply line availability and accessibility, perimeter protection of a hospital during a response event, maximization of trauma and burn care capabilities, adequacy of equipment and personnel in a surge situation, and the ability to interact with the general public in a crisis environment are all issues to be addressed in the statewide strategic plan.

BACKGROUND

State Plan for Trauma Care

The 1999 report by the Department of Health entitled "Timely Access to Trauma Care" led to significant statutory changes to address the lack of timely access to trauma care due to the state's fragmented trauma system.[1] The Department of Health (DOH) was assigned the responsibility for planning and establishing a statewide inclusive system for trauma

[1] Chapter 99-397, Laws of Florida.

care.

In order to provide timely access to care, trauma standards are based on the "golden hour" principle, which is generally defined by emergency medical personnel as the first 60 minutes of intensive care during which it is possible to save the life of an injured or traumatized person. Guidelines and standards for the statewide system have been developed through a collaborative effort by DOH, the Agency for Health Care Administration (AHCA), trauma centers, and the Boards of Medicine and Nursing.

The State Trauma System Plan was published in December, 2000, and addresses the five-year timeframe, December 2000 to December 2005. The plan incorporates the recommendations of the 1999 trauma report and is based on statutory requirements provided in Chapter 395, Part II, Florida Statutes. The plan outlines the objectives of the state trauma system and is the basis for system improvements as well as future development. According to the state plan, as each objective is addressed, detailed action plans will be developed. DOH reviews the action plans annually and updates the state trauma system plan based on those reviews.

Trauma Regions and Trauma Service Areas:

As part of the state trauma system plan, s. 395.4015, F.S., requires DOH to establish trauma regions which cover all geographical areas of the state. These regions may serve as the basis for the development of department-approved local or regional trauma plans. These regions may be defined by DOH based upon:

- Geographical considerations so as to ensure rapid access to trauma care by patients;
- Historical patterns of patient referral and transfer in an area;
- Inventories of available trauma care resources;
- Predicted population growth characteristics;
- Transportation capabilities, including ground and air transport;
- Medically appropriate ground and air travel times; and
- Other appropriate criteria.

The department is also required to develop trauma system plans for the department-defined trauma regions and is provided specific minimum statutory components for those plans. Those minimum components include, but are not limited to:

- An assessment of current and future trauma care needs based upon incidence rates and acuity indicators developed by the department.
- The availability of qualified health professionals, including physicians and surgeons, capable of staffing trauma centers to the level of current and future assessed needs.
- The organizational structure of the regional trauma system, including the identification of local trauma agency service areas within the region.
- Emergency medical services communication system usage and dispatching.
- Data collection regarding system operation and patient outcome, as well as the number, type, and generalized locations of state-sponsored trauma centers needed to meet the needs of the population.
- The coordination and integration between the trauma centers and other health care facilities which may provide services to trauma victims.
- Flow patterns of trauma cases and transportation system design and resources, including air transportation services, provision for interfacility trauma transfer, and the prehospital transportation of trauma victims.
- Periodic performance evaluation of the trauma system and its components.

Florida has twenty "state-approved trauma centers[2]" as defined in s. 395.4001, F.S. This section also defines the various types of trauma centers including "Level I trauma centers,"[3] "Level II Trauma Centers,"[4] and

[2] "State-approved trauma center" means a hospital that has successfully completed the selection process pursuant to s. 395.4025, F.S., and has been approved by the department to operate as a trauma center in the state. (s. 395.4001(8), F.S.)

[3] "Level I trauma center" means a trauma center that: (a) has formal research and education programs for the enhancement of trauma care and is determined by the

"pediatric trauma referral centers."[5] Level I and Level II trauma centers should each be capable of annually treating a minimum of 1,000 and 500 patients respectively, with an injury severity score of 9 or greater. Based on the numbers and locations of trauma victims with these injury severity scores, the state is divided into nineteen trauma service areas, and, at a minimum, there should be at least one trauma center in each service area.[6]

The trauma report by DOH provided recommendations regarding the structural framework for the statewide trauma system. The trauma system design is based on the regional concept and recognizes the trauma agency as the key administrative structure at the regional level. Section 395.4001, F.S., defines a "trauma agency" as a department-approved agency established and operated by one or more counties, or a department-approved entity with which one or more counties contract, for the purpose of administering an inclusive regional trauma system. As an arm of county government, the trauma agency acts as a system planner and coordinator at the local level. Trauma agencies work to resolve system problems to ensure that critically injured trauma patients are transported to the most appropriate medical facility in the least amount of time.[7] There are currently four trauma agencies with those in Hillsborough, Palm Beach, and Broward covering a single county each, and a fourth trauma agency covering 12 counties in north/central Florida.

Classification of Hospital Facilities

Rule 59A-3.252, F.A.C., defines the four classes of hospital[8] facilities that are licensed by the Agency for Health Care Administration. Class I or general hospitals include: general acute care hospitals with an average length of stay of 25 days or less for all beds; certain long term care hospitals,[9] and rural hospitals designated under Part III of Chapter 395, F.S. Hospitals are not specifically classified as "acute care" or "specialty." Generally all Class I and Class II hospitals as well as Class III specialty medical hospitals are classified as "acute care" because they have licensed acute care beds.[10]

Hospital Emergency Departments

Certain health care providers are obligated under state and federal law to provide emergency services. Under Florida law, a hospital with an emergency room or a trauma center is required to provide emergency services and care for any emergency medical condition whether the person arrived at the hospital in person, by ambulance, or by a medically necessary transfer from another medical facility.[11] Federal law also requires this (Emergency Medical Treatment and Active Labor Act-EMTALA).

County Emergency Operations Centers

Chapter 252, F.S., governs emergency management for the state of Florida. Under the State Emergency Management Act, the Division of Emergency Management (DEM) in the Department of Community Affairs is responsible for maintaining a comprehensive

department to be in substantial compliance with Level I trauma center and pediatric trauma referral center standards. (b) Serves as a resource facility to Level II trauma centers, pediatric trauma referral centers, and general hospitals through shared outreach, education, and quality improvement activities. (c) Participates in an inclusive system of trauma care, including providing leadership, system evaluation, and quality improvement activities. (s. 395.4001(5), F.S.)

[4] "Level II trauma center" means a trauma center that: (a) is determined by the department to be in substantial compliance with Level II trauma center standards. (b) Serves as a resource facility to general hospitals through shared outreach, education, and quality improvement activities. (c) Participates in an inclusive system of trauma care. (s. 395.4001(6), F.S.)

[5] "Pediatric trauma referral center" means a hospital that is determined by the department to be in substantial compliance with pediatric trauma referral center standards as established by rule of the department. (s. 395.4001(7), F.S.)

[6] s. 395.402, F.S.

[7] "State Trauma System Plan," Department of Health, Division of Emergency Medical Services and Community Health, December 2000.

[8] "Hospital" means any establishment that: (a) Offers services more intensive than those required for room, board, personal services, and general nursing care, and offers facilities and beds for use beyond 24 hours by individuals requiring diagnosis, treatment, or care for illness, injury, deformity, infirmity, abnormality, disease, or pregnancy; and (b) Regularly makes available at least clinical laboratory services, diagnostic X-ray services, and treatment facilities for surgery or obstetrical care, or other definitive medical treatment of similar extent. A "general hospital" is a facility that meets these provisions and regularly makes its facilities and services available to the general population. (s. 395.002 (11) and (13), F.S.)

[9] Refers to long term care hospitals which meet the provisions of subsection 59A-3.065(27), F.A.C.

[10] Information provided to committee staff on November 21, 2003, by Laura MacLafferty, Unit Manager, Hospital and Outpatient Services Unit, Agency for Health Care Administration.

[11] Ss. 395.1041, 395.401, and 401.45, F.S.

statewide program of emergency management. DEM coordinates with the federal government, other state and local government agencies, and private agencies that have a role in emergency management. During a disaster, DEM activates the State Emergency Response Team (SERT) at the State Emergency Operations Center (SEOC). The SEOC serves as the central clearinghouse for disaster related information and requests for assistance from local governments. Within the EOC, DEM operates the State Warning Point, a 24-hour emergency communications center which provides Florida with a single communications point to disseminate warnings to local or state government officials of potential or unfolding emergencies.

The SERT consists of representatives of over 50 different state agencies, voluntary organizations and business groups. The emergency management offices of all 67 counties, municipalities, special districts and school districts assist in all phases of emergency operations. SERT agency personnel and resources are deployed through 17 Emergency Support Functions (ESFs) common to all disasters to support the response actions of local governments and voluntary relief agencies. ESF #8 coordinates the health and medical services during a disaster event.[12]

Section 252.38, F.S., establishes local government's emergency management powers. Each county is required to establish and maintain an emergency management agency and develop a county emergency management plan that is consistent with the state emergency management plan. A county emergency management plan must include an evacuation component, a shelter component (risk and host events), and a post-disaster and recovery component, and must have provisions addressing aspects of preparedness, response, recovery, and mitigation. These plans assign lead and support responsibilities for county agencies and personnel that coordinate with the emergency support functions outlined in the State Plan.

County emergency management plans address responses and actions in the event of an emergency, identifying those positions or agencies responsible for specific functions under given circumstances. County plans detail the process to be followed at the local level whenever an emergency or disaster occurs as a result of natural, technological or manmade causes. These plans interface with plans of contiguous jurisdictions, regions, and the state comprehensive emergency management plan.[13]

Federal Funding

To date, the state has received $40,581,081 for FY 2001-02, and $47,452,595 for FY 2003-04 from the Centers for Disease Control and Prevention for public health preparedness and planning. Through grants from the Health Resources and Services Administration, Florida received $6,441,669 for FY 2001-02, and $25,775,968 for FY 2003-04 to fund hospital response planning.

METHODOLOGY

Staff worked in conjunction with staff from the Senate Appropriations Committee and the Senate Health, Aging, and Long-Term Care Committee to compile information for this interim report and Interim Report 2004-108, Trauma Care Planning and Funding. Meetings and interviews were held with representatives of the Department of Health, the Agency for Health Care Administration, the U.S. Centers for Disease Control and Prevention, the Florida Hospital Association, the Florida Committee on Trauma (Florida Chapter, American College of Surgeons), the Florida College of Emergency Physicians, medical and administrative staff of Orange Regional Medical Center and Tampa General Hospital, and many medical and hospital security professionals from facilities around the state including Miami, Broward County, Jacksonville, Orlando, Lake City, Tallahassee and Panama City. Staff participated in a teleconference on "Bioterrorism Preparedness," sponsored by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), and a Department of Health sponsored "CDC Leadership Forum" roundtable meeting in Tallahassee on November 5, 2003. In addition, staff received a briefing from Florida Chief of Domestic Security Initiatives Stephen Lauer on lessons learned from his recent trip to Chaim Sheba Hospital in Tel Aviv, Israel. Staff attended the initial meeting of the DOH/AHCA/FHA/Trauma working group charged with drafting the "Florida Disaster Response Plan" on November 17-18, 2003. Staff reviewed numerous documents, training and planning tools, risk matrices and reports related to bioterrorism and mass casualty response planning, including confidential documents related to Florida's actual response capabilities.

[12] Florida Department of Community Affairs, Division of Emergency Management website, www.floridadisaster.org.

[13] Rule 9G-6.0023, F.A.C.

FINDINGS

Hospital Capacity

Currently, Florida has 272 licensed hospitals, including 178 general "acute care" hospitals, 31 rural hospitals, 11 long-term care hospitals, 3 specialty hospitals for women and/or children, 3 specialty medical hospitals, 25 specialty psychiatric hospitals, 15 specialty rehabilitation hospitals and 6 Intensive Residential Treatment Facilities (IRTF). In addition, there are twelve federal (V.A. and military) hospital facilities located in the state.

According to the Agency for Health Care Administration, 226 Florida hospitals have "acute care" hospital beds, while the psychiatric, rehabilitation and IRTF hospitals do not have "acute care" beds licensed. There are 219 hospitals in the state that offer emergency services and care.[14] In addition, there are numerous other non-hospital medical facilities such as one-day ambulatory surgical centers, stand-alone medical clinics, nursing homes, rehabilitation facilities, mental health facilities and private physician offices.

Included in these numbers are six Level I and thirteen Level II Trauma Centers and four Burn Treatment Centers. All of the Level I Trauma Centers are also designated Pediatric Centers. Five of the Level II Trauma Centers are designated Pediatric Centers. There is one "stand-alone" Pediatric Trauma Center at Children's Hospital in Miami. All of these facilities may be called on in the event of a mass casualty incident, an infectious disease outbreak, or biological attack.

According to a recent survey conducted by the Florida Hospital Association, Florida has 52,756 licensed acute care hospital beds, 4,728 critical care beds, 16,479 hospital beds used for other types of care, 3,662 emergency examination rooms, 36 hospital-affiliated urgent care facilities, 2,772 operating rooms with varying levels of technical capability, several thousand negative pressure and isolation rooms, and well-equipped decontamination teams in hospitals across the state.[15] For the most part, resources are well-distributed across populations in the state.

The hospital industry is a highly competitive business environment. While Florida has experienced an increase in population over the last decade, new hospital bed expansion slowed due to various factors including managed care, federal regulations and reduced hospital stays.[16] That slowdown in bed expansion has reversed over the past two years as hospital utilization rates have caught up with current bed inventories. According to AHCA, some utilization rates have been reported in the 90% range this year.[17] Twenty hospital expansion programs, including 1550 new beds, have been approved over the last two years with almost thirty additional expansion requests pending at AHCA.[18] Not all of these new beds are "acute care" beds, but all could be available for purposes of surge capacity depending on the nature of the response requirements. Through the work of the Agency for Health Care Administration, it appears that Florida's hospital bed needs are being addressed, including annual fluctuations in bed occupancy rates due to increased tourist populations in the winter months.

A major medical emergency, whether natural or terrorist-related, will require coordination with all first responders, medical transport, internal communications, law enforcement protection and public information communications for the hospitals and medical facilities involved in the response to the event. The Centers for Disease Control and Prevention described this coordinated effort as a "system of systems" in a Leadership Forum Roundtable meeting held in Tallahassee on November 5, 2003, to discuss Florida's response capabilities.

Hospital Surge Capacity – A "System of Systems"

The federal Department of Health and Human Services guideline[19] for surge capacity is 500 adult and pediatric patients per million population with acute illness or trauma requiring hospitalization from a biological, chemical, radiological or explosive terrorist incident. This response capacity must address all components of the health care system including critical care, inpatient, outpatient and pre-hospital care.

[14] Information provided to committee staff on November 25, 2003, by Laura MacLafferty, Unit Manager, Hospital and Outpatient Services Unit, Agency for Health Care Administration.

[15] Florida Hospital Association Hospital Threat Response Plan: Capacity and Services Inventory, November 2003

[16] "Building Beds," by John Finotti, Florida Trend, November 2003, pp 56-58

[17] ibid

[18] ibid

[19] Hospital Bed Capacity: Critical Benchmark #2-1; National Bioterrorism Hospital Preparedness Program Cooperative Agreement Guidance, www.hrsa.gov/bioterrorism

Based on a population of 17,000,000, Florida should have a surge capacity of 8,500 hospital beds. The Florida Hospital 2003 Survey[20] indicates a surge capacity of just over 7,600 hospital beds (does not include staffing or equipment) identified by responders as available. Seventy-six percent of Florida hospitals responded to this confidential planning document. While the data, broken down by Regional Domestic Security Task Force (RDSTF) Region, shows minor weaknesses in some regions, it is unknown if that is a result of lack of reporting by some facilities in those regions. Generally, in regions where survey response rates were highest, surge capacity guidelines were met. In its annual strategic planning session for the state Domestic Security Strategic Plan on December 8-11, 2003, the Mass Casualty Subcommittee of the State Working Group identified "surge capacity" in trauma centers and non-trauma center acute care hospitals as an area of increased focus and funding for the upcoming year.

Surge capacity is a "moving target" as hospital census counts change daily, and even hourly. Several tools which need to be incorporated into a statewide, regional and local response planning model can make surge management more efficient in an emergency with mass casualties. First, each hospital must have a rapid discharge process for all in-hospital patients who may be safely discharged or moved to step-down facilities. This releases acute care beds for the use of incoming victims. This process is part of the standard Health Emergency Incident Command System (HEICS) response plan model.[21]

Next, an on-scene standard patient identification and tracking system has been discussed that would allow for field triage of patients, assignment of a computer-readable patient "arm/wrist band" with a specific identification number that would allow for tracking of the patient and all of the patient's treatment and medications. This system would assist in getting victims to care faster and in assuring care and location tracking. For example, if a victim is taken from a particular location on a blast scene and transported to a hospital, there will be a record of which victims from that part of the crime scene were transported to specific hospitals. This step can speed the process of helping families identify where their loved ones have been taken for treatment. In addition, there would be a record of patient care from the moment the first paramedic administered treatment through the entire pre-hospital and hospital process. The concept for this type of system has been developed and various components, including the scannable wristband, have been developed by various vendors, but implementation of the complete system would require substantial funding. Staff has not seen a cost estimate at this time.

Another important tool in surge flexing management, or "flexing," is bed inventory tracking. Duval County has implemented a bed tracking computer system that allows hospitals to report current bed capacities to the local EOC. As patients are dispatched from an accident scene or event, the ambulance staff can delete the number of beds to be used by the accident victims from the hospital to which the victims will be delivered for treatment. In this manner, a rough record of bed capacity can be kept and patients will be less likely to arrive at hospitals that are above capacity. A regional and state bed capacity computer inventory system would allow for real-time flexing for emergency responders and for monitoring purposes, and would allow regional and state emergency managers to better prepare for calling in assistance from other areas of the state. Such an inventory system could be used for available transportation (ground and aero-medical) and staffing resources, as well. While this concept has been discussed, Duval County is currently the only known user of such a computer-based inventory system. The Department of Health, the Mass Casualty Subcommittee of the Domestic Security State Working Group, and the Hospital Response Strategic Plan Working Group are all studying best practices for implementing such a tracking capability.

While an exact need for surge flexing will be different for the type and scope of any given event, Florida has adequate surge capacity in critical care, emergency room and surgical facilities. Hospitals have negative pressure and isolation unit capabilities. Ventilators, CT scanners, blood banks and MRI equipment appear to be in adequate supply for daily operations with some minor exceptions. Through funding assistance from the federal government, decontamination equipment and personal protection equipment (PPE) kits have been made available to most hospitals in the state. Training for some of this equipment is still pending, but progress has been made in the last few months.

Two areas of weakness are evident in hospital surge response. First, external communications, both voice and data, with other agencies is a problem across the state. Currently, most hospitals do not have reliable interoperable communications with local law

[20] ibid
[21] www.emsa.ca.gov/dms2/heics98a

enforcement or emergency operations centers. They do have interoperable communications with ambulance units, EMT's and paramedics, but not necessarily with the county or state health department or other medical facilities. In many cases, this issue is resolved through conference calling but a failure of phone systems would negate this approach. The Department of Health issues alerts through e-mail, fax and phone calls. According to DOH, many emergency departments still have no e-mail capability and some do not have fax capability. In at least one case, staff has had reported a reluctance by law enforcement to have hospitals on the same radio frequencies because of "law enforcement sensitive" information which may be discussed over those frequencies. At the strategic planning session on November 17-18, 2003,[22] participants discussed reverting to short wave radio as a fail-safe system in an emergency environment. At a minimum it would be classified as a redundant back-up system. Communications systems and pre-event planning for communications hierarchies are critical components of a statewide strategic plan.

The second, and most difficult, area of weakness is the lack of capacity for burn treatment. Florida has four licensed Burn Treatment Centers with a total of 65 licensed treatment beds. Burn treatment beds require specialized staffing and some specialized equipment. For this reason, most facilities choose not to keep a large inventory of burn treatment beds. Burn treatment can be a long-term process so these beds tend to have a high occupancy rate under normal circumstances according to AHCA and DOH. Two assumptions regarding burn treatment seem to be universal among hospital medical professionals interviewed by staff. First, the most severely injured burn victims will probably have to be transported to the nearest available burn treatment bed. This transport will most likely be by air. Other burn victims, and any surge of severely burned victims, will have to be treated at the nearest hospital or medical facility. Hospitals will have to "convert" Intensive Care Unit (ICU) beds to burn beds and respond with available staff until burn treatment staff teams can be brought in from other regions or states. While the lack of designated capacity appears daunting, hospital staffs indicate that in an emergency, everyone will do whatever becomes necessary to treat victims. In fact, in a declared Public Health Emergency, authorized in s. 381.00315, F.S., the Secretary of the Department of Health may waive requirements so that hospitals may adjust bed uses as needed to respond. The same waiver could be applied in a State of Emergency declared by the Governor, as defined in s. 252.36, F.S.

Both the external communications issue and the burn care capacity issue are being addressed by the Domestic Security State Working Group.

The Mass Casualty Subcommittee and the Interoperable Communications Subcommittee are working with the State Technology Office and the various entities involved in community-wide emergency communications needs to develop a solution. Phase I of an interoperable communications network is in development and Phase II received a funding recommendation from the State Domestic Security Oversight Board on December 11, 2003.

Burn care capacity is being addressed by the Department of Health, its "Burn Care" committee and the Mass Casualty Subcommittee of the Domestic Security State Working Group. Through funding provided by Health Resources and Services Administration (HRSA) grants, the state strategy is to increase the temporary surge capacity for burn patients from 60 beds up to 270 beds this year and to over 500 beds next year.[23]

Trauma Care System

Pursuant to s. 395.402, F.S., Florida is divided into 19 "trauma service areas." A trauma service area is determined based on population density and an ability to respond to a specified number of patients in a trauma center environment. For purposes of medical response times, the trauma service areas are designed to provide the best and fastest services to the state's population. Trauma centers are scattered throughout the state, with the exception of the area from Santa Rosa County in the western panhandle across to Hamilton County in the eastern panhandle. Escambia County has three trauma centers and Duval County has a trauma center. Traveling south from Duval County, the nearest trauma centers are in Daytona Beach on the east coast, and Tampa on the west coast and Orange Regional Medical Center in Orlando. Shands Hospital at University of Florida in Gainesville has an application to become a trauma center pending with the Department of Health. According to the Department of Health, if Shands meets "critical elements" requirements by April 30, 2004, it would become a provisional trauma center.

[22] DOA, AHCA, DEM, FDLE, FHA and medical/security professionals meeting to write "Florida Hospital Disaster Response Plan," Orlando

[23] Department of Health 2003-04 HRSA Funded Initiatives

The actual process for trauma center verification will require 22 months from granting of provisional status.

While s. 395.4015, F.S., describes a system of trauma regions, made up of trauma service areas within a specified geographic area, for purposes of statewide trauma response planning, this effort has never been formally incorporated into the state's trauma system. The statute requires the development of local and regional trauma agencies to form a state trauma system plan. The Department of Health is charged with establishing these regions to cover all geographic areas in the state. At this time, only four local or regional trauma agencies have been formed. Those trauma agencies (regions) are: Broward County, Palm Beach County, Hillsborough County, and a twelve county region including and surrounding Alachua County. No other Trauma Regions or agencies have been designated by the Department of Health.

Florida currently has twenty trauma centers (with one pending application) that appear to meet the state standards for treatment. The Department of Health regularly monitors each state-approved trauma center for compliance with statutes, rules and treatment standards. Funding for statutorily required staffing of trauma centers continues to be a serious problem. At least two of the state's trauma centers are currently experiencing major staffing concerns, with Orlando Regional Medical Center working under a temporary, 18 month agreement with the local governments in its service area to supplement funding to pay for the required specialty staff.

In the areas where trauma centers are in existence, they provide a central core of the hospital emergency department's response capability. Trauma center staffs are trained in flexing up to deal with extensive multiple injuries and are available on-call to the emergency departments on a 24-hour basis. Areas that do not have trauma centers may experience delays in availability of specialized emergency and trauma treatment depending on time factors related to a specialist's proximity to the facility and ability to get to the patient.

While the twenty trauma centers in operation today are doing a good job of serving the normal trauma needs of their communities, the disparity of trauma care across the state can not be ignored. For example, Escambia County, in trauma service area 1, which includes the four westernmost counties in the panhandle, has one Level One trauma center and two Level Two Trauma Centers. The nearest trauma center to the east of Escambia is located in Duval County. There are no trauma centers in trauma service areas 2, 3, 4, 6, 13, 14 or 17. Trauma service areas 1, 9, 10, 16, 18 and 19 have more than one trauma center (including pediatrics). It is important to note that there are general acute care hospitals with emergency department facilities in the trauma service areas not served by designated trauma centers. For example, well-equipped and prepared emergency departments exist in Bay, Jackson, Leon, Madison, Taylor, Columbia and Alachua counties across North Florida. To date, there have been no incentives for any of these facilities to pursue designation as a trauma center. In addition, there are statutory and financial disincentives based on specialty staffing requirements. Shands-University of Florida at Gainesville is the only one of these facilities pursuing the designation at this time.

The state does not yet have a complete trauma care system, as required by Chapter 395, Part II, Florida Statutes. Trauma care is available in most areas of the state, but a coordinated, operational system for trauma, and general hospital emergency response, has not been completed. Without either incentives or mandates from government there does not appear to be a mechanism for causing the expansion of the number of designated trauma centers to meet the statutory goal of a minimum of one trauma center in each trauma service area.[24] Additionally, the state has not been formally organized into trauma regions, as required in s. 395.4015, F.S. While several local groups have organized themselves, fifty-two counties are not assigned to a state trauma region at this time.

One solution to the development of statewide "trauma regions" which is being discussed by various interested parties is to formalize the "trauma regions" by adopting the boundaries of the Regional Domestic Security Task Force (RDSTF) regions codified in s. 943.0312, F.S. With a few adjustments or concessions to issues of geographic distance concerns, the 19 trauma service areas would be easily adaptable to the RDSTF regions and could continue to operate as trauma service areas within the RDSTF regions.

Hospital Emergency Response Planning

Pursuant to s. 395.1055(1)(c), F.S., and AHCA rule 59A-3.078, F.A.C., all Florida hospitals are required to maintain a written comprehensive emergency management plan as a condition of licensure. This plan serves as the individual facility's response plan for all types of emergency conditions. Many hospitals use the Hospital Emergency Incident Command System

[24] s. 395.042, F.S.

response plan tool for operation in an emergency condition.

HEICS is a response model developed by hospitals and emergency response agencies in California with funding provided by state grants. The model is in its third edition, with the latest update project completed by the San Mateo County Health Services Agency, Emergency Medical Services through a State of California Prevention 2000 Block Grant in January 1998.[25] This model, which was designed to complement emergency response and law enforcement Incident Command System (ICS) models, is available free of charge to any entity which chooses to use it. Because of its logical organization and public availability, HEICS has become a standard response plan for hospitals throughout the nation. The California HEICS model is a very detailed template. Hospitals that use the HEICS model are free to modify the model to adapt to the unique needs and configurations of their own facilities. Many hospitals use some parts of the HEICS model, leaving aside components or procedures that do not fit into their administration or operational structure.

Hospitals throughout Florida work with state and local emergency management agencies as part of the Comprehensive Emergency Management Plan (CEMP) process required by s. 252.35 and s. 252.38, F.S. Working relationships between hospitals and local Emergency Operations Centers (EOC) seem to be strong across the state.

Hospitals appear to have good emergency response plans within individual facilities, and communications with local EOC's. As a need for a coordinated, interagency response to a mass casualty or bioterror event moves further into the community, currently there is not a comprehensive strategic plan for hospitals to interact with other first responders and law enforcement. Much work is being done, across several government agencies and public and private response disciplines to create and implement a plan in a timely manner.

The Department of Health is the lead state agency for Emergency Medical Services and is responsible for licensing paramedics and emergency medical technicians. The Agency for Health Care Administration is responsible for licensure of most medical facilities. Professional boards which are administratively housed within the Department of Health are responsible for licensing their respective healthcare practitioners. The Division of Emergency Management, within the Department of Community Affairs, is responsible for state and local Comprehensive Emergency Management Planning, and the Department of Law Enforcement is responsible for response to terrorist acts.

Each of these agencies, along with local emergency managers, law enforcement, firefighters, emergency medical technicians and planners are working together with the Florida Hospital Association, the Florida Committee on Trauma (Florida Chapter, American College of Surgeons), the Florida College of Emergency Physicians, various emergency room specialists (nurses and doctors), hospital administrators and hospital safety/security directors from around the state to create a working statewide hospital response capacity strategic plan, to be known as the Florida Hospital Disaster Response Plan.

Under the guidance of the Department of Health and the Florida Hospital Association, this group came together as a working team for the first time on November 17-18, 2003 to begin the process of formalizing a statewide strategic plan. The meeting was coordinated with AHCA, FDLE and DEM. A DEM facilitator was present to guide the team's work at the meeting. Subgroups had prepared a general template for a plan based on their reviews of plans from other states. The general template served as a starting point for work done at the meeting and for ongoing assignments to smaller workgroups dealing with specialty issues to be included in the plan.

The group agreed to a "plan production" schedule which would assure the completion of the rough draft by January 15, 2004, all adjustments and peer group review complete by February 15, 2004, and presentation to hospital boards, RDSTF's and Domestic Security Oversight Boards for implementation of the Florida Hospital Disaster Response Plan by March 31, 2004. Due to the complex nature of this coordinated effort, this schedule will need to be monitored to assure timely completion of all work products. The Department of Health, FDLE and the Florida Hospital Association have all agreed to provide staff support to get the project completed. The working group reached consensus on several major issues at the November 2003 meeting.

After much debate, it was determined that hospitals should establish Memorandums of Understanding for issues related to surge capacity in emergency situations,

[25] www.EMSA.CA.GOV/DMS2/HEICS98a

law enforcement support and protection, and communications with first responders and the general public in a public health emergency or mass casualty event with their County Emergency Management Office. Concerns were raised about how hospitals would communicate and make decisions regarding the transport and treatment of "overflow" patients once the facilities had reached their maximum surge capacity. It was determined by the group that the most efficient and effective way to manage the required "flexing" of resources was through the local Emergency Operations Center. In addition, as the local facilities reach capacity levels, the regional and state "Emergency Services Function 8" (ESF 8) – Health and Medical Response teams can be activated to assist in managing the resources needed to get victims to the best, closest available treatment. By developing this model, it became clear to the group that such a pre-planned structure for responding to a medical emergency would work in any terrorist-related mass casualty or bioterror event, as well as any natural disaster with mass injuries. As the event extends beyond the ability of one county to respond, RDSTF regional medical response teams will be dispatched. As an RDSTF region's response capability is depleted, adjoining RDSTF regions' teams are dispatched until the need is met or all state resources are engaged. This logical response plan relieves hospitals of trying to deal with logistics of supply lines, additional staffing needs, victim transport or support services. As those needs are communicated from the responding hospitals to the local EOC, the local EOC takes charge of the logistical response and requests regional and state assistance as needed.

A discussion regarding the organizational structure of Florida's trauma system resulted in the group's recommendation that state trauma regions should mirror the state Regional Domestic Security Task Force regions as nearly as possible while maintaining the 19 already established "Trauma Service Areas" within the state. By merging these two concepts the group determined that the state trauma system would be easier to understand and operate. While this recommendation was made by a group representing a cross-section of affected participants from across the state, it is not an official recommendation by any specific agency or organization at this time.

The "trauma and burn care" subgroup recommended adoption of already established area guidelines by the Department of Health Office of Trauma as the standard trauma and burn care response plans for the strategic plan. This subgroup consisted of a trauma surgeon, an emergency room surgeon, an emergency room nursing supervisor, a hospital lab technician, a hospital security director and others who joined the discussion at various times to respond to questions.

The "planning and operations" subgroup discussed many logistical issues including how to keep hospitals secure during an emergency through access control and law enforcement protection; how to keep supply lines open for needed pharmaceuticals, surgical and medical equipment and consumables; staffing reinforcement; how to address the specific needs of disabled, the elderly, children and non-English speaking patients; planning with local schools on how and where to work with students and parents to re-unite them or to protect them if they can not be re-united; mental health concerns and how to work with the "worried well" and victims' families; and advance planning for care and protection of staff families.

The "command and control" subgroup focused on coordinated incident command structures, both within the hospital and externally with local response agencies and the general public. The two most prevalent concerns were hospital security and communication. Hospitals are concerned that more detailed law enforcement response plans are needed to assure civil order during a mass event. Law enforcement will be called up to secure perimeters, control access, keep supply routes open and keep the peace at the same time they are being called on to respond to the actual scene of the attack. This part of the plan will require pre-event coordination with local, regional and state law enforcement to assure that hospitals are not overrun or paralyzed during the crisis response. Internal communications, redundancy of communications systems, and interoperable communication capability with the local Unified Incident Command and first responders are issues to be resolved by this subgroup in writing the state response plan.

While many issues remain to be resolved by medical and first response professionals, the Florida Hospital Disaster Response Plan is now being formulated by the persons with the proper expertise to make the plan viable. Many people have worked on various, smaller components of the plan over the last two years and now the comprehensive model can be completed.

Core Competency Standards

The Health, Hospital, Medical and EMS Subcommittee of the Domestic Security State Working Group (SWG) has spent the last several months working to develop Core Competency Guidelines for Hospital Response Training. These training standards address mandatory

and recommended levels of training for biological, radiological, chemical, incendiary and explosion casualty response. The levels of training are determined by general divisions of a hospital and further by departments within the division, i.e., clinical, administration, support personnel, emergency room, etc.

Competencies for Hazardous Materials are set by the Occupational Safety and Health Administration (OSHA 29 CFR 1910.120 and 29 CFR 1910.1200). Competencies for bioterror response are new and defined in the soon to be published SWG document. The subcommittee recognized that radiological materials competencies are very similar to OSHA hazardous materials operating competencies. New competencies for Bomb/Blast and Burn Training, Hospital Incident Command (following HEICS model) and All-Hazards response are included in the forthcoming recommendations, as well. This document will provide specific training standards for all Florida hospitals to assure preparedness for a terrorist event.

Federal Funding

Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) and Health Resources and Services Administration (HRSA) funds have been made available to states for bioterrorism and hospital response preparedness. In the Federal Fiscal Year 2002-2003 funding cycle, CDC and HRSA guidances focused on increased laboratory and epidemiological surveillance capacity. For the FFY 2003-2004 cycle, that focus has shifted significantly towards hospital preparedness for bioterrorism and weapons of mass destruction (WMD) event response. While Florida received just over $6.5 million for hospital response in FFY 2002-2003, that amount grew to $25 million in the current cycle.

As the State Department of Health, in consultation with AHCA, Division of Emergency Management, FDLE and the many interested organizations and professionals directly responsible for the state's hospital response capabilities work toward the final adoption of a Florida Hospital Disaster Response Plan, focus areas for funding should become much clearer. As a precursor to the release of a final plan scheduled for March 2004, the Health, Hospital, Medical and EMS Subcommittee of the Domestic Security State Working Group (SWG) will meet December 8-10, 2003 along with all other components of the SWG to formulate Florida's Domestic Security Strategic Plan for 2004. As a part of that meeting, the subcommittee will make funding recommendations for use of the HRSA grant. Since many of the subcommittee members are working with the DOH, AHCA, DEM, FDLE and the Hospital Response group, the funding recommendations should follow the work already done on the Florida Hospital Disaster Response Plan. Committee staff will attend the December meetings and continue to monitor the Response Plan to assure that federal funds are properly directed towards identified needs within a documented strategic plan.

Neither CDC, HRSA, Department of Homeland Security Office of Domestic Preparedness (ODP) nor any other federal funds designated for domestic security response may be used for any construction or long-term, normal operational costs such as personnel. The funds are designated for equipment, planning, training and exercise practice. Long-term issues facing the state's trauma centers, such as the cost of specialty staffing, cannot be resolved through these domestic security grant allocations.

RECOMMENDATIONS

Committee staff recommends that the Legislature:

1. Consider some form of incentive program, such as scholarship programs or assistance with the approval process, for hospitals and medical professionals in underserved trauma service areas in order to encourage better trauma care and trauma system coverage across the state.

2. Consider adoption of the seven statutorily designated Regional Domestic Security Task Force regions as the statutorily required State Trauma Regions. Maintain the 19 statutorily designated "Trauma Service Areas."

3. Monitor the ongoing drafting process of the Florida Hospital Disaster Response Plan to assure a timely and complete plan is prepared and disseminated.

4. Review Domestic Security State Working Group and Oversight Board prioritization of HRSA grant allocations to assure focus on maximization of trauma, burn and emergency response capability across the state.

5. Continue to monitor ongoing issues related to trauma center funding. While these funding issues are largely operational in nature, (i.e., specialty staffing), the result of a reduction in the number of

trauma centers due to the lack of such funding may result in a reduction in available emergency response capability.